UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

FRESHUB, INC. and FRESHUB, LTD., Plaintiffs, v. AMAZON.COM, INC., a Delaware Corporation, AMAZON.COM SERVICES LLC, a Delaware Limited Liability Company, PRIME NOW, LLC, a Delaware Limited Liability Company, and WHOLE FOODS MARKET SERVICES, INC., a Texas Corporation, Defendants.	Case No. 1:19-CV-00885-ADA **Public Version**

MOTION FOR SUMMARY JUDGMENT OF INVALIDITY

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Statutes:

Table of Exhibits to the Declaration of J. David Hadden

Exhibit	Description	Short Cite
1	U.S. Patent No. 9,908,153	'153 patent
2	U.S. Patent No. 10,213,810	'810 patent
3	U.S. Patent No. 10,232,408	'408 patent
4	U.S. Patent No. 10,239,094	'094 patent
5	U.S. Patent No. 9,821,344	'344 patent
6	Notice of Abandonment regarding U.S. Patent Application No. 11/301,291 ('344 patent), dated Jan. 3, 2012 - Weiss Dep. Ex. 16 (KNOBBE-000673-674)	Notice of Abandonment
7	Email from Y. Keren to I. Zohar et al., dated Feb. 1, 2017 - Keren Dep. Ex. 6 (FRESHUB 060726-729)	Keren Email
8	Rebuttal Expert Report of Dr. Michael T. Johnson, served March 5, 2021	Johnson Reb. Rep.
9	Petition for Revival of an Application for Patent Abandoned Unintentionally Under 37 CFR 1.137(a), related to U.S. patent application No. 11/301,291 (issued as '344 patent), dated January 20, 2017 - Weiss Dep. Ex. 19 (KNOBBE-000694-95)	Petition to Revive
10	Expert Report of Dr. Nenad Medvidović Regarding Infringement by Amazon.com, Inc., Amazon.com Services, LLC (Formerly Known as Amazon Digitial Services, LLC), Prime Now, LLC, and Whole Foods Market Services, Inc. of U.S. Patent Nos. 9,908,153; 10,213,810; 10,232,408; and 10,239,094, served Feb. 10, 2021	Medvidović Rep.
11	Chart that breaks out the limitations of the independent claims by recited components and functions and categorizes the dependent claims for ease of analysis	Claim Listing

Exhibit	Description	Short Cite
12	Transcript of the deposition of William Adam, taken Dec. 29, 2020 (excerpts)	Adam Dep. Tr.
13	Device User Interface DRAFT Version 9, dated Nov. 18, 2005 - Adam Dep. Ex. 4 (FRESHUB 018447-476)	Device User Interface
14	Ikan Strategic Business Plan, dated Oct., 2017 - Adam Dep. Ex. 10 (FRESHUB 001678-1731)	Strategic Bus. Plan
15	Ikan chart displaying inaccuracy of Ikan's software in converting spoken words to text - Adam Dep. Ex. 12 (FRESHUB 001583-584)	Adam Ex. 12
16	Assignment of patents from Ikan Holdings LLC to Freshub Ltd., dated May, 2019 (FRESHUB 004717-724)	Assignment from Ikan to Freshub
17	Transcript of the deposition of Meir Iri Zohar, taken Jan. 20, 2021 (excerpts)	Zohar Dep. Tr.
18	Smart Kitchen Commerce - OCS Program - File No. 58293, dated June, 2016 - Zohar Dep. Ex. 8 (FRESHUB 007809-902)	Zohar Ex. 8
19	Expert Report of Mona Singh, Ph.D. Regarding Validity Pursuant to 35 U.S.C. § 112, served Mar. 5, 2021	Singh Rep.
20	Transcript of the deposition of Mona Singh, Ph.D., taken Mar. 16, 2021 (excerpts)	Singh Dep. Tr.
21	Transcript of the deposition of Aaron Striegel, Ph.D., taken Mar. 12, 2021 (excerpts)	Striegel Dep. Tr.
22	Transcript of the deposition of Nenad Medvidović, Ph.D., taken Mar. 19, 2021 (excerpts)	Medvidović Dep. Tr.
23	Rebuttal Expert Report of Aaron Striegel, Ph.D. Regarding Patent Eligibility Under 35 U.S.C. § 101 and Objective Indicia of Nonobviousness	Striegel Reb. Rep.
24	Opening Expert Report of Dr. Michael T. Johnson, served Feb. 10, 2021	Johnson Rep.

I.   INTRODUCTION

Freshub asserts four related patents. Each claims the result of voice shopping—*e.g.*, adding an item to a shopping list by voice. But the claims disclose no technological solution for achieving this result. Instead, they recite only functional steps—"receiving" a spoken order, "translating" it to text, "matching" it to database entries, "identifying" a corresponding item, "adding" the item to a list, and "displaying" the list to the user—and then direct a skilled artisan to invent a solution using conventional computers. In doing so, Freshub claims *all* ways to achieve the claimed result, including existing solutions and those yet to be invented by others. Such claims are abstract and ineligible for patenting under 35 U.S.C. § 101.

The claims are also invalid for failure to comply with the written description and enablement requirements of 35 U.S.C. § 112. The patents' shared specification provides no description of how to achieve the "translating," "matching," and "identifying" steps. And the record shows that the patentees *tried* and *failed* to implement speech recognition around the time of filing, suggesting they never invented any such technology. It is not surprising, then, that the specification neither adequately describes the claimed voice system nor shows that the inventors possessed it.

The invalidity grounds presented in this motion point to a common defect of the asserted patents: they seek to remove vast swaths of technology from the public domain while contributing nothing to the public store of knowledge. Such claims are invalid under our patent laws. The Court should enter summary judgment of invalidity under § 101 and § 112.

II.   FACTUAL BACKGROUND

A.   The Asserted Patents

Freshub asserts four U.S. patents—Nos. 9,908,153 ("the '153 patent"), 10,213,810 (the "'810 patent"), 10,232,408 (the "'408 patent"), and 10,239,094 (the "'094 patent") (the asserted patents"). (Exs. 1-4 (Patents).) The patents share an identical specification and are each titled

"Systems and methods for scanning information from storage area contents." (*Id.*) The patents have a common parent, U.S. Patent No. 9,821,344 (the "'344 patent"), filed on December 12, 2005, and claim priority to a provisional application filed on December 10, 2004. (*Id.*)

The specification describes that, at the time of the patents, perishable items with "faintly or poorly printed" expiration dates were "often densely packed into a refrigerated storage unit," preventing users from "conveniently" monitoring them. ('153 patent at 1:23-34.) To address this problem, the patents propose a system for reading tags on refrigerated items and prompting the user to use or replace the items before their expiration dates. (*Id.* at 1:35-37; Abstract.) Accordingly, the parent '344 patent claims an electronic refrigeration system that takes digital images of refrigerated items and alerts users of upcoming expiration dates. (Ex. 5 ('344 patent, cls. 1-7).)

The applicant abandoned prosecution of the '344 patent in 2011, and the Patent Office issued a Notice of Abandonment on January 3, 2012. (Ex. 6.) The application remained abandoned for more than five years. During that time, Amazon released the category-defining Echo smart speaker and Alexa virtual assistant, which then achieved considerable success. (*See, e.g.*, Ex. 7; Ex. 8 (Johnson Reb. Rep.) at ¶¶ 63, 65-70.) In 2017, the applicant petitioned to revive the application and filed continuation applications with new claims directed to placing orders using a generic voice processing system. (Ex. 9.) The claims Freshub asserts in this case each relate to this voice ordering system. (*See* Ex. 10 (Medvidović Rep.) at ¶ 18.)

Of the asserted claims, claim 1 of the '153 patent, claim 1 of the '810 patent, claims 1, 20, and 30 of the '408 patent, and claim 20 of the '094 patent are independent. (*See* Exs. 1-4 (Patents).) The claims are focused on results rather than any specific improvement to technology. Each requires a system or method for: (1) *receiving* a spoken order from a user, (2) *translating* it to text, (3) *identifying* the item the user requested, (4) *adding* the item to the user's "set," or shopping list,

2

(5) and enabling the item set for *display*.[1] Some recite also that the identifying step may be based

on *matching* the translated text to a description. Claim 20 of the '408 patent is representative:

> 20. A computer-implemented method, the method comprising:
>
> *receiving* over a network at a network interface a *digitized order of a user* from a remote system configured to receive user spoken words, the remote system comprising a microphone, a wireless network interface, and a digitizer coupled to the microphone, wherein the digitizer is configured to convert spoken words into a digital representation;
>
> *translating*, using a processing system comprising at least one processing device and configured to perform translation of voice orders to text, at least a portion of *the digitized order to text*;
>
> *matching*, using the processing system, *the text*, translated from the digitized order, to a text description associated with a unique product identifier;
>
> based at least in part on the unique product identifier associated with the text description matched to the text translated from the digitized order, *identifying*, using the processing system, *an item corresponding to the text*;
>
> causing the *identified item to be placed on an item set* associated with the user; and
>
> enabling the item set, including at least the identified item, *to be displayed* via a user display remote from the processing system.

The other asserted independent claims recite the same steps. Claim 1 of the '153 patent, claim 1

of the '810 patent, claim 1 of the '408 patent, and claim 20 of the '094 patent all require a "[a]

voice processing system" comprising conventional computing components (*e.g.*, a microphone, a

wireless network or network interface, a computer, and non-transitory memory) that perform the

steps of receiving and translating a voice order, identifying an item corresponding to the order,

adding the item to a list, and displaying the list. Other claims recite trivial variations on these same

general steps: that the "set" or list can be provided to an "item provider" ('810 patent, cl. 1); or

that the translated text is matched to an item description ('408 patent, cl. 1; '094 patent, cl. 20).

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[1] Exhibit 11 breaks out the limitations of each asserted claim, organized into groups based on the recited components and functions. Amazon addresses in this motion each group of limitations, and in turn all asserted claims as directed by the Court. (*See* Dkt. 28 at 1.)

Claims 20 and 30 of the '408 patent require the same steps but are directed to a "computer-implemented method" and a "[n]on-transitory memory" that stores instructions for performing them. None of the claims recites any specific technological solution to achieve the desired results.

Neither does the specification, which focuses on the refrigeration system of the '344 patent and includes only a cursory description of a voice processing system. ('153 patent at 8:17-9:14, 13:56-14:39, Fig. 8.) In Figure 8, reproduced here, the user first orders an item by making a spoken request through a generic user interface, e.g., by "activating" a button or using a voice command. (Id. at 8:9-11, 8:21-25.) The system uses a generic "voice recording device[]" with a conventional digital or analog memory to rec-

FIG. 8

ord the user's request. (Id. at 8:9-11, 17-25, 35-36.) Next, the system transmits the user's recorded request to a "remote system" (id. at 14:10-12) using a conventional network, "such as the Internet" (id. at 8:30-31). Once received, the remote system translates the order to text. (Id. at 14:12-15.)
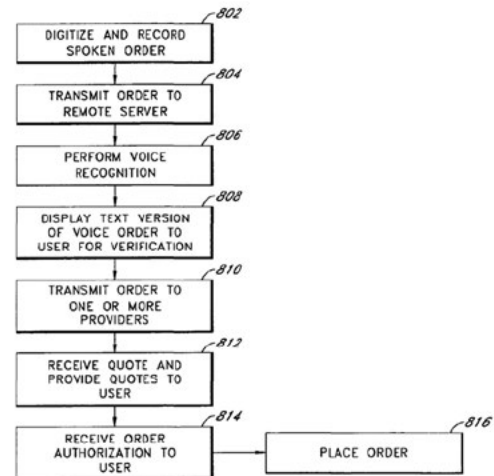
The specification depicts the remote system as a literal black box, as shown in Figure 2 here, connected to a refrigerator with a scanner, computer, screen, and camera. The patents disclose no new method for performing the critical "translation" step. Instead, the specification explains that the remote system may use existing "voice recognition software" or conventional "grammar constrained recognition and/or natural language recognition." (Id. at 8:36-38, 14:15-17.)
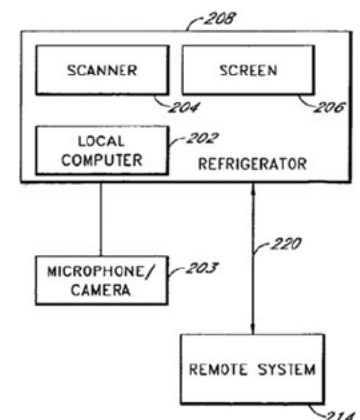
After translating a voice order to text, the system can perform a text search against a catalog of items—i.e., "match[] the [translated] text with text stored in association with a SKU (or other

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identifier) to locate the correct SKU" and identify the requested item. (*Id.* at 8:51 53.) This step

uses any conventional communication method   such as a "web site, telephone, fax, [or] short

messaging system"   that works. (*Id.* at 8:56 62.) Finally, the system displays information to the

user on a generic display device. (*Id.* at 13:2-6, 13:43-44, Fig. 7.) The patents thus claim nothing

more than functional steps implemented using existing and conventional technology.

B.   The patentee never developed a viable voice processing system.

Though the patents purport to claim the idea of voice shopping, the original assignee of the

patents, Ikan Technologies, Inc., did not have possession of any working voice recognition and

processing technology.[2] █████████████████████████████████████

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[2] The patents were later assigned to Ikan Holdings LLC, a successor company to Ikan
Technologies, Inc. (*See, e.g.,* '153 patent at Cover.)

[3] Freshub took no part in the prosecution of the asserted patents, which were assigned to
Freshub in May 2019. (*See* Ex. 16 (Assignment from Ikan to Freshub).) █████████████

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III.   ARGUMENT

There is no genuine dispute that the asserted claims are invalid for at least two reasons: the claims are ineligible under § 101 because they are directed to the result of voice shopping, and recite no specific technological solution for achieving it; and the patents neither enable nor adequately describe the claimed "translating," "matching," and "identifying" steps under § 112.[4]

A.   The asserted claims are ineligible for patenting under § 101.

The Supreme Court directs courts to take a two-step approach in evaluating patent eligibility. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014). First, the court must determine whether the claims are directed to an abstract idea. *Id*. If so, the court must decide whether the claims add an "inventive concept"—"an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract idea] itself.'" *Id.* at 217-18 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 72-73 (2012)). Because patent eligibility is an issue of law, resolving eligibility rarely involves "genuine disputes over the underlying facts material to the § 101 inquiry." *See, e.g.*, *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1368 (Fed. Cir. 2018). That is why courts routinely resolve patent eligibility at summary judgment. *See, e.g.*, *BSG Tech LLC v. BuySeasons, Inc.*, 899 F.3d 1281, 1291 (Fed. Cir. 2018).

1.   Freshub's patent claims are drawn to the impermissibly abstract idea of voice shopping.

At step one, the Court looks at the focus of the claims to determine their "character as a whole." *Elec. Power Grp. v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). Here, Freshub's claims are directed to the idea of voice shopping but disclose no specific technological solution

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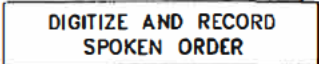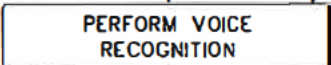
[4] The Court construed "placing more weight on words"—recited in claim 9 of the '153 patent, claims 5 and 6 of the '810 patent, claims 5 and 6 of the '408 patent, and claim 21 of the '094 patent—according to its plain and ordinary meaning. (Dkt. 63 at 1.) The Court declined to construe the translating, identifying, and matching terms under § 112, ¶ 6, but provided no affirmative construction. (*Id.*)

for doing so. A line of Federal Circuit cases makes clear that such functional claims are abstract and ineligible. *Two-Way Media Ltd. v. Comcast Cable Commc'ns, LLC*, 874 F.3d 1329, 1337 (Fed. Cir. 2017); *Enco Sys., Inc. v. DaVincia, LLC*, No. 2020-1995, 2021 WL 855856, at *3 (Fed. Cir. Mar. 8, 2021) (claims reciting speech-to-text translation directed to abstract idea where "[t]he focus is not any specific improved computer techniques for performing" the claimed functions).
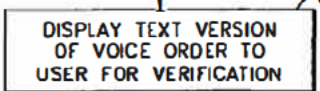
In *Two-Way Media*, the Federal Circuit invalidated patents related to a system for streaming audio/visual data over the internet because the claims recited "functional results"—*e.g.*, converting, routing, controlling, monitoring, and accumulating records—but failed to "sufficiently describe how to achieve these results in a non-abstract way." *Two-Way Media*, 874 F.3d at 1333, 1337-38. Similarly, in *Apple, Inc. v. Ameranth, Inc.*, the Federal Circuit held invalid claims directed to the idea of generating restaurant menus for a mobile device. 842 F.3d 1229, 1235 (Fed. Cir. 2016). The court held the claims ineligible because they disclosed no "particular way of programming or designing the software" to create those menus or features. *Id.* at 1241. The claims recited nothing more than "'typical' hardware elements" and "commonly known" programming steps. *Id.* at 1241-42. Relevant here, certain challenged claims in *Ameranth* required a menu that could be "manually modified by handwriting or voice recording." *Id.* at 1244. The court held that referring to "the use of existing . . . voice capture technologies using a computer system" did not make the claims eligible. *Id.* at 1245.

Freshub's claims are no different. They recite functional steps—receiving and translating a spoken order, identifying an item corresponding to the order, and displaying a list of the identified items—implemented using only generic components and existing voice technology. They claim no new algorithm or new software to accomplish any of the steps. Nor does the specification describe any. The two columns that reference the voice system describe only a generic "voice recording device" for capturing voice orders and "[a] remote computer processing system [that]

7

receives, stores, and accesses" digitized voice orders, "match[es] the user's spoken order with a product," provides quotes from vendors, and allows the user to place an order. (*See* '153 patent at 8:17-9:14.) These are just functional steps performed by generic computing equipment, not a specific solution. Indeed, as shown below, the specification does not describe how to perform *any* of these functions:[5]

Function	Specification Disclosure (citations for "match" function from '408 patent; all others from '153 patent)
Receive	13:57: "At state 802, the user verbally provides an order." 14:8-10: "For example, the user can speak the order to the microphone 203, illustrated in FIG. 2. The system then digitizes and records the spoken order in a file." Fig. 8, step 802: [DIGITIZE AND RECORD SPOKEN ORDER — 802]
Translate	8:36-38: "The remote computer system then utilizes voice recognition software to translate the voice recording files into text files." 14:12-15: "At state 806, the remote system performs voice recognition on the order in order to interpret the spoken order and converts the spoken order into text." 14:15-17: "By way of example, the remote system can use grammar constrained recognition and/or natural language recognition." Fig. 8, step 806: [PERFORM VOICE RECOGNITION — 806]
Match	8:43-47: The remote computer system can optionally match the spoken order with a SKU (Stock Keeping Unit, e.g., an identifier, such as a unique numeric identifier associated with a specific product) retrieved from a SKU database. 8:49-53: For example, if the user verbally ordered a cereal by name, the remote computer system translates the name into text or other computer readable form, and matches the text with text stored in association with a SKU (or other identifier) to locate the correct SKU. 14:30-34: The remote system can optionally match the translated version of the spoken order with a SKU retrieved from a SKU database, which stores SKUs in association with a text description of the corresponding item, and transmit the SKU to the providers.
Identify	8:47-49: The SKU database optionally stores SKUs in association with a text description of the corresponding item. 8:56-59: The remote computer processing system optionally shares a text version

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[5] During claim construction, Freshub identified the specification disclosures excerpted in this table as the purported algorithms for performing the translate, match, and identify functions. (Dkt. 44-1.) Even viewed in the light most favorable to Freshub, these disclosures do not disclose a specific technological solution to the problem of voice shopping.

Function	Specification Disclosure (citations for "match" function from '408 patent; all others from '153 patent)
	(e.g., the textual representation of the order and/or the corresponding SKU) and/or recorded verbal version of the order. 8:65-9:1: For example, the remote system can add the item(s) identified in the verbal order to the user's shopping cart or other shopping list, optionally in association with a digital file that includes the user's spoken order. 14:32-34: a SKU retrieved from a SKU database, which stores SKUs in association with a text description of the corresponding item,
Add	8:65-9:1: For example, the remote system can add the item(s) identified in the verbal order to the user's shopping cart or other shopping list, optionally in association with a digital file that includes the user's spoken order.
Display	14:18-23: At state 808, the remote system transmits the text version of the order to the user so that the user can verify if text version is an accurate interpretation of the spoken order. For example, the remote system can transmit the text version to the system 202 or another user computer for display to the user. Fig. 8, step 808: DISPLAY TEXT VERSION OF VOICE ORDER TO USER FOR VERIFICATION

The claims' recitation of voice processing steps does not render them non-abstract: Freshub's experts conceded that the voice-related claim limitations refer to existing systems that were ubiquitous as of the date of the patents, and thus cannot provide a specific solution for voice processing.[6] And because the patents refer to prior art voice systems, Freshub receives no credit for the claimed voice processing steps in the § 101 analysis.[7] *See Ameranth*, 842 F.3d at 1244-45.

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[6] ████████████████████████

[7] The claims' token reference to voice processing does not render them patent-eligible; courts routinely invalidate such claims. *IPA Techs., Inc. v. Amazon.com, Inc.*, 307 F. Supp. 3d 356, 369 (D. Del. 2018); *In re West View Rsch., LLC*, No. 14-CV-2675-CAB (WVG), 2015 WL 9685577, at *3-4, 6-7 (S.D. Cal. Dec. 11, 2015); *Parus Holdings, Inc. v. Sallie Mae Bank*, 137 F. Supp. 3d 660, 674 (D. Del. 2015); *Potter Voice Techs., LLC v. Apple Inc.*, No. C 13-1710 CW, 2015 WL 5672598, at *4 (N.D. Cal. June 11, 2015); *Gabara v. Facebook, Inc.*, 484 F. Supp. 3d 118, 122-

Beyond directing use of prior art systems, the claims merely recite receiving a user's request for an item and ordering it from the provider or adding it to the user's shopping list. The Federal Circuit recently invalidated similar claims in *VOIT Techs., LLC v. Del-Ton, Inc.* There, the Federal Circuit affirmed a district order invalidating claims directed to "'a method of buying and selling an item' through the internet." No. 5:17-CV-259-BO, 2018 WL 385188, at *1 (E.D.N.C. Jan. 11, 2018), *aff'd*, 757 F. App'x 1000 (Fed. Cir. 2019). The patent "describe[d] the idea of transmitting compressed images from one computer to another in order to facilitate the buying and selling of goods," and recited steps of "data-compressing the image data" and "decompressing the images." *Id.* at *2; *VOIT Techs.*, 757 F. App'x at 1002-03. But the specification referred only to existing "commercially available" methods of compression, including the "industry standard JPEG for-mat." *VOIT Techs.*, 2018 WL 385188 at *3. The district court noted that setting aside this existing technology, "[w]hat's left" in the patent "is the idea of using these concepts in order to sell prod-ucts. That is to say, rather than being an 'asserted improvement in computer capabilities,' the patent deals with an 'abstract idea for which computers are invoked merely as a tool.'" *Id.* (citation omitted). The Federal Circuit agreed. 757 F. App'x at 1003. Freshub's claims similarly amount to nothing more than the abstract idea of voice shopping implemented using conventional comput-ers and voice recognition software as a tool. They fail at step one of the *Alice* test.

2.   **Freshub's claims disclose no "inventive concept."**

At step two, the Court considers "the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217. ███████████████

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███████████████████████ Claim 20 of the '408 patent, for example, recites receiving

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23, 129-30 (S.D.N.Y. 2020).

a "digitized order of a user" over a network. The patents describe that this is accomplished through a conventional network, such as the Internet. ('153 patent at 8:9-11, 36-38.) The "digitized" nature of the order is inherent to the function itself—a file transmitted over the Internet must be "digital." *See Two-Way Media*, 874 F.3d at 1341; (Johnson Rep. at ¶ 1355-56). The order is received from a remote system comprised of "a microphone, a wireless network interface, and a digitizer coupled to the microphone." ███

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███ The remaining limitations of the claim—identifying an item and adding to a shopping list—are conventional purchasing steps common to any e-commerce system. *See, e.g., cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F3.3d 1367, 1379-81 (Fed. Cir. 2021); *Telebuyer, LLC v. Amazon.com, Inc.*, No. 2:13-cv-1677-BJR, 2015 WL 4493045, at *10 (W.D. Wash. July 23, 2015). The other independent claims are non-inventive variations of the same high-level functions.[8] (Johnson Rep. at ¶ 1357.)

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[8] *See, e.g.*, '408 patent, cls. 1, 30 (reciting "receiv[ing] . . . a digitized" order or communication, "translat[ing] . . . to text," "identify[ing] an item," and "add[ing]" the item to a list that is "displayed"); '810 patent, cl. 1 (reciting "receiv[ing] . . . a digitized order," "translat[ing] . . . to text," "identify[ing] an item," and "includ[ing] the identified item in a set" that is "displayed"); '094 patent, cl. 20 (reciting "receiv[ing] . . . a digitized spoken user order," "translat[ing] . . . to text," "identify[ing] a corresponding item," and includ[ing] "the identified corresponding item in a list" that is "displayed"); '153 patent, cl. 1 (reciting "receiv[ing] . . . the digitized order," "translat[ing] . . . to text," "identify[ing] an item," and "add[ing] the identified item to a list" that

The opinion of Freshub's expert Dr. Striegel does not change this.

is "displayed").

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There is also nothing inventive about the ordered combination of the claim elements. (Johnson Rep. at ¶ 1358.) Receiving a voice order is inherent to the abstract idea of voice shopping. A voice order must be received before it can be translated to text that can be used to identify an item. And only once that item is identified can it be added to a list or ordered. The recited functional steps are thus inherent and logically required to accomplish the idea. *See IPA Techs.*, 307 F. Supp. 3d at 372 (observing that "it is impossible to interpret a spoken request without receiving one, and impossible to refine a query that has not yet been constructed"). Freshub's patent claims thus fail at *Alice* step two.

Through the asserted claims, Freshub attempts to claim all solutions, both present and future, to the problem of voice shopping while contributing nothing to the inventing public. The

claims are not limited to any particular application or specific devices but seek to cover *any* way

of processing speech to identify a requested item without specifying *how* to perform any of the

key functions recited in the claims. (Johnson Rep. at ¶ 1364.) The patents thus attempt to patent

nearly limitless embodiments of the abstract idea; they are unduly preemptive and invalid under §

101. *See Mayo*, 566 U.S. at 88 ("[T]he underlying functional concern here is a relative one: how

much future innovation is foreclosed relative to the contribution of the inventor.").

3.   The dependent claims also lack an inventive concept.

The dependent claims add nothing inventive either. Some recite alternative generic ways

or components to provide information to the user—such as through a website (*see, e.g.*, '153 pa-

tent, cl. 6; '810 patent, cl. 8; '408 patent, cls. 7, 8), a telephone (*see, e.g.*, '153 patent, cl. 7; '810

patent, cl. 8; '408 patent, cl. 7), short messaging system (SMS) (*see, e.g.*, '153 patent, cl. 8; '810

patent, cl. 8; '408 patent, cl. 7), through an unspecified "voice output system" (*see, e.g.*, '153

patent, cl. 5), or generically "using speech or text" (*see, e.g.*, '810 patent, cl. 7). (Johnson Rep. at

¶ 1359.) Others recite the known, routine function of storing a user's spoken request or item

description as audio (*see e.g.*, '153 patent, cl. 4; '810 patent, cls. 13, 14; '408 patent, cls. 15, 16),

or the use of admittedly generic and conventional "grammar constrained recognition and/or natural

language recognition" to translate the voice order to text (*see, e.g.*, '094 patent, cl. 24). Such

limitations are non-inventive and cannot save the claims. (Johnson Rep. at ¶ 1360); *Affinity Labs

of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1264 (Fed. Cir. 2016) ("[T]he dependent claims

. . . all recite functions that are not inventive but simply constitute particular choices from within

the range of existing content or hardware, such as specifying that the regional broadcast is FM

radio or video content . . . .").

Other dependent claims recite that the system may use additional information to identify

the requested item.[10]   But these claims, too, describe only the *idea* of using this information, not any specific solution or improvement to existing technologies or voice recognition algorithms to do so. (*See* Johnson Rep. at ¶ 1361.) "[M]erely selecting information, by content or source, for collection, analysis, and display" does not provide an inventive concept at step two. *Elec. Power Grp.*, 830 F.3d at 1355.

Other dependent claims add insignificant activity inherent to shopping. For example, a user can "add a reminder" for an item ('153 patent, cl. 10; '810 patent, cl. 11; '408 patent, cls. 13, 27), choose additional or alternative items ('810 patent, cls. 9, 10; '408 patent, cls. 11, 12), add items to a shopping cart ('408 patent, cl. 19), and select from "a plurality of providers" ('810 patent, cl. 16; '408 patent, cl. 18). (Johnson Rep. at ¶ 1362.) Claims reciting "specific type of ordering" amount to "insignificant post-solution activity" that does not supply inventive concept. *Ameranth*, 842 F.3d at 1242; *see also Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 716 (Fed. Cir. 2014) ("Adding routine additional steps such as updating an activity log, requiring a request from the consumer to view the ad, restrictions on public access, and use of the Internet does not transform an otherwise abstract idea into patent-eligible subject matter.").

The remaining dependent claims recite conventional and well-known elements. For example, identifying an item by "an item name" ('810 patent, cl. 12; '408 patent, cl. 14), and identifying a "SKU" for an item ('153 patent, cl. 11). (Johnson Rep. at ¶ 1362.) None is inventive. *See Mayo*, 566 U.S. at 79 ("[T]he prohibition against patenting abstract ideas cannot be circumvented by . . .

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[10] These are: "a recorded history associated with the user" (*see, e.g.*, '810 patent, cl. 4), "the user's past purchase history," "a purchase history of the user," or "the user's purchase history" (*see, e.g.*, '153 patent, cl. 9; '810 patent, cl. 6, '408 patent, cls. 4, 6, '094 patent, cl. 21), "location information of the user" (*see, e.g.*, '810 patent, cl. 2; '408 patent, cl. 2; '094 patent, cl. 22), "preference information of the user" (*see, e.g.*, '810 patent, cl. 3; '408 patent, cl. 3; '094 patent, cl. 23), other "types of items being purchased by the user" (*see, e.g.*, '810 patent, cl. 5; '408 patent, cl. 5), or user verification (*see, e.g.*, '810 patent, cl. 15; '408 patent, cl. 17).

adding insignificant post-solution activity.") (quotations omitted); *Ameranth*, 842 F.3d. at 1244

("insignificant post-solution activity" did not save claims); *Intell. Ventures I LLC v. Erie Indem.*

Co., 850 F.3d 1315, 1328-29 (Fed. Cir. 2017) (reciting known concept of using XML tags was

"akin to limiting an abstract idea to one field of use or adding token post solution components").

B.   Freshub's Patent Claims Are Invalid Under 35 U.S.C. § 112

The asserted claims fail to meet the requirements of the first paragraph of 35 U.S.C. § 112.

Section 112 of the Patent Act, which requires that the specification include "a written description

of the invention." To satisfy the written description requirement, the specification must "'clearly

allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.'"

Ariad Pharms., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc) (quoting

Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563 (Fed. Cir. 1991)). "[T]he test for sufficiency is

whether the disclosure of the application relied upon reasonably conveys to those skilled in the art

that the inventor had possession of the claimed subject matter as of the filing date." *Id.* at 1351.

Here, the evidence shows that the claim limitations related to "translating," "matching," and "iden-

tifying" lack written description; summary judgment is warranted on this basis. *See Flash-Con-*

trol, LLC v. Intel Corp., No. 1:19-cv-01107-ADA, 2020 WL 4561591, at *10 (W.D. Tex. July 21,

2020) (granting summary judgment of invalidity for lack of written description).

Section 112 further requires that the specification teach those skilled in the art how to make

and use the full scope of the claimed invention without "undue experimentation." *ALZA Corp. v.*

Andrx Pharms., LLC, 603 F.3d 935, 940 (Fed. Cir. 2010). Although the specification need not

disclose what is well known in the art, this rule is one "of supplementation, not a substitute for a

basic enabling disclosure." *Id.* at 940-41 (quoting *Auto. Techs. Int'l, Inc. v. BMW of N. Am., Inc.*,

501 F.3d 1274, 1282 (Fed. Cir. 2007)). Claims are not enabled when, at "the effective filing date

of the patent," "one of ordinary skill in the art" could not practice their "full scope . . . without

16

undue experimentation."[11] *MagSil Corp. v. Hitachi Global Storage Techs., Inc.*, 687 F.3d 1377, 1380-81 (Fed. Cir. 2012).

As the Federal Circuit has explained, written description and enablement "usually rise and fall together," and "a recitation of how to make and use the invention across the full breadth of the claim is ordinarily sufficient to demonstrate that the inventor possesses the full scope of the invention, and vice versa." *LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1345 (Fed. Cir. 2005). Here, the specification does not describe "how to make and use the invention" as claimed. The asserted claims recite the steps of "translating" voice to text, "matching" the translated text to a text description ('094 and '408 patents only), and "identifying" a corresponding product or item. Because the specification provides only a vague suggestion that these steps *can* be performed, with no description of how to actually perform them, the patents are invalid for failure to comply with the written description and enablement requirements of § 112.

1.   Freshub's patents neither describe nor enable the claimed "translating"

Every asserted independent claim requires "translating" a portion of a digitized order or voice communication to text.[12] The specification states that translation *should* be performed, but provides no explanation of how to do so. (*See, e.g.,* '153 patent at Fig. 8, Step 806 ("perform voice

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[11] Several factors are relevant to determine whether the necessary experimentation would be "undue," including (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

[12] The limitation "translate at least a portion of the digitized order to text" appears in claim 1 of each of the '153, '810, and '408 patents. A slight modification, "translate at least a portion of the digitized voice communication to text" appears in claim 30 of the '408 patent. The limitation "translating, using a processing system comprising at least one processing device and configured to perform translation of voice orders to text, at least a portion of the digitized order to text" appears in claim 20 of the '408 patent, and "translating, using a translation module executed by the second computer system, at least a portion of the digitized spoken order to text" appears in claim 1 of the '094 patent.

recognition"); *id.* at 8:36-38 ("The remote computer system then utilizes voice recognition software to translate the voice recording files into text files."); *id.* at 14:12-15 (the system "performs voice recognition on the order in order to interpret the spoken order and converts the spoken order into text."); *see* Ex. 24 (Johnson Rep.) at ¶¶ 1373-75.) The only disclosure that even arguably describes the claimed translation is the specification's description that "[b]y way of example, the remote system *can use grammar constrained recognition and/or natural language recognition*." (*See* '153 patent at 14:15-17 (emphasis added).) But as of the filing date of the patents, neither "grammar constrained recognition" nor "natural language recognition" referred to any *specific* algorithm for translating voice to text. (Johnson Rep. at ¶ 74.) As of the mid-2000's, voice processing systems typically involved two primary components: automatic speech recognition ("ASR") and natural language understanding systems. (*Id.* at ¶ 119.) ASR required complex algorithms to convert voice to a digitized signal, and then process those signals to identify hypothesized words. (*Id.* ¶¶ 120-122, 130-137.) ASR could use grammar models, which become increasingly complex depending on the size of the recognized vocabulary and intended use environment. (*Id.* ¶¶ 126, 138-147.) Natural language understanding took a variety of different approaches, separate from ASR, and is a growing and evolving field highly dependent on the intended use. (*Id.* ¶¶ 148-171.) The patents do not describe any of this: they disclose no commercial voice recognition system, no algorithm to use, and no means of implementing a grammar model, a natural language understanding model, or any other speech recognition model. Freshub cannot simply substitute the understanding of its experts for the actual disclosures in the specification. *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1366 (Fed. Cir. 1997). The specification lacks written description for the translation step. (Johnson Rep. at ¶ 1373.)

Similarly, the specification fails to demonstrate that the patentees *possessed* the claimed invention as of the filing date. (*See* Johnson Rep. at ¶¶ 1365.) "'[T]he purpose of the written

18

description requirement is to prevent an applicant from later asserting that he invented that which

he did not,' and the requirement is particularly important when, as here, claims are added later

during prosecution in response to development by others." *Quake v. Lo*, 928 F.3d 1365, 1373

(Fed. Cir. 2019) (quoting *Agilent Techs., Inc. v. Affymetrix, Inc.*, 567 F.3d 1366, 1383 (Fed. Cir.

2009)). There is no embodiment describing *how* the inventors translated a spoken order to text.

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██████████████████   Here, as is typically the case, written description and enablement "rise and

fall together." *LizardTech,*, 424 F.3d at 1345. The specification does not recite how to make and

use the invention, and thus has not demonstrated possession of it. (Johnson Rep. at ¶¶ 1365-78.)

The claims are invalid for failure to meet the written description and enablement requirements.

2.   Freshub's patents neither describe nor enable the claimed "matching."

The asserted independent claims of the '094 and '408 patents each require "match" or

"matching" the translated text to text descriptions of items.[13] Because the patents do not explain

how to accomplish "matching," the claims are not enabled. (Johnson Rep. at ¶ 1365.)

The specification merely states the result of the claimed matching without disclosing how

to achieve it. It states that the system should match the text to an item description:

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[13] In the claims of the '408 patent, the item descriptions are associated with "unique product identifiers." The limitation "match the text, translated from the digitized [order] / [voice communication], to a text description [stored in a database comprising text descriptions of items and associated unique product identifiers] / [associated with a unique product identifier, wherein the text description is accessed from a data store] appears in claims 1 and 30 of the '408 patent, and the similar limitation "matching . . . the text, translated from the digitized order, to a text description associated with a unique product identifier" appears in claim 20. The limitation "match the text, translated form the digitized spoken order, to text descriptions of items, wherein the text descriptions of items are stored in a data store" appears in claim 20 of the '094 patent.

> The remote computer system can optionally match the spoken order with a SKU (Stock Keeping Unit, e.g., an identifier, such as a unique numeric identifier associated with a specific product) retrieved from a SKU database. The SKU database optionally stores SKUs in association with a text description of the corresponding item. For example, if the user verbally ordered a cereal by name, the remote computer system translates the name into text or other computer readable form, and matches the text with text stored in association with the SKU (or other identifier) to locate the correct SKU.

('408 patent at 8:43-53.) This describes the *result* of the matching but does not convey how to go about implementing this crucial function.—*i.e.*, how to match text to a catalog that includes millions (or in Amazon's case billions) of items. The specification contains only one other disclosure relating to "matching" the voice translation, and it is even less helpful: "The remote system can optionally match the translated version of the spoken order with a SKU retrieved form a SKU database, which stores SKUs in association with a text description of the corresponding item . . . ." ('408 patent at 14:30-34.) The specification does not disclose an algorithm or method for performing the claimed "matching," and has neither described nor enabled the claims.

C.   Freshub's patents neither describe nor enable the claimed "identifying."

The asserted independent claims of all four patents require "identifying" an item corresponding to the translated text.[14] The specification fails to provide a description of how this identification is accomplished. (Johnson Rep. at ¶ 1373-75.) It states that text descriptions of items may be stored in databases ('153 patent at 8:47-49; 14:32-34) and may be shared by a remote computer processing system (*id.* at 8:56-59), but does not provide any means of performing identification. The only disclosure in the specification related to the identification step merely describes that an item corresponding to the user's voice order *can* be identified. (*Id.* at 8:65-9:1 ("For example, the remote system can add the item(s) identified in the verbal order to the user's shopping

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[14] The limitation "identify an item corresponding to the text [description]" appears in claim 1 of the '153 patent, claim 1 of the '810 patent, and claims 1 and 30 of the '408 patent. The limitation "identify a corresponding item" appears in claim 20 of the '094 patent, and "identifying, using the processing system, an item corresponding to the text" appears in claim 20 of the '408 patent.

car or other shopping list . . . .").) This disclosure does not describe *how* the claimed identification is to be performed, *i.e.* how a particular item from a list of potentially thousands or even billions of items could be selected for presentation to the user. The specification again neither sufficiently describes nor enables the asserted claims. (Johnson Rep. at ¶¶ 1365-78.)

D.   Extrinsic evidence confirms that Freshub's patents do not enable or describe the claimed translating, matching, and identifying functions.

As described above, one of ordinary skill in the art at the time of filing the specification would not have been able to implement the claimed voice recognition steps of translating, matching, and identifying without undue experimentation. It is unsurprising then that Ikan did not provide a description of the claimed invention that would satisfy the written description and enablement requirements of § 112, because the undisputed evidence shows that ████████████

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Moreover, the evidence shows that even over a decade later, translating voice orders to text, matching text orders to specific items, and identifying items to add to shopping lists was anything but routine. ████████████████████████

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███████████████████████████ This undisputed record evidence confirms that as of the

filing date, one of ordinary skill in the art would have had to perform considerable experimentation

to make and use the full scope of the claimed invention according to Freshub, including functional

natural language processing. (*See* Johnson Rep. ¶ 1365.)

The Federal Circuit has held claims invalid for lack of enablement based on evidence that

it would take 18 months to two years' work to practice the invention. *Cephalon, Inc. v. Watson*

Pharms., Inc., 707 F.3d 1330, 1339 (Fed. Cir. 2013). Similarly, where a claimed language trans-

lator "would require from 1 ½ to 2 man years of effort" to program, the amount of required exper-

imentation was "clearly unreasonable." *White Consol. Indus. v. Vega Servo*-Control, 713 F.2d

788, 791 (Fed. Cir. 1983). Moreover, a "patentee's own failures to make and use the later claimed

invention at the time of the application" is further evidence that undue experimentation is required.

Id.; *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1244 (Fed. Cir. 2003). ████████████████

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IV.   CONCLUSION

For the foregoing reasons, Amazon respectfully requests that the Court grant summary

judgment of invalidity of the asserted patents under § 101 and § 112.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The foregoing document was filed under the Court's CM/ECF system, automatically effecting service on counsel of record for all other parties who have appeared in this action on the date of such service.

/s/ *J. David Hadden*
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24